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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,322	04/13/2004	Gabriella Cerrato-Jay	220-291 / TEL0666-01	4510
832	7590	05/09/2006		
BAKER & DANIELS LLP 111 E. WAYNE STREET SUITE 800 FORT WAYNE, IN 46802			EXAMINER LUKS, JEREMY AUSTIN	
			ART UNIT 2837	PAPER NUMBER

DATE MAILED: 05/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/823,322

Applicant(s)

CERRATO-JAY ET AL.

Examiner

Jeremy Luks

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/13/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "tailpipe in fluid communication with said second passage and with said outlet," as recited in Claims 7, 12 and 21 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-6, 8-11, 13-20 and 22 rejected under 35 U.S.C. 102(a) as being anticipated by Hoche (DE 102 39 132.7 – The Examiner will refer to Hoche (7,032,709) for a translation of the foreign document herein).

With respect to Claims 1, 3, 9, 15 and 18, Hoche teaches a muffler for an internal combustion engine (Col. 1, Lines 25-27) comprising: a housing (Figure 1, #1) having an inlet (Figure 2, #3) and an outlet (4), an exhaust flow path defined within said housing (Figure 1, #1), said exhaust flow path dimensioned to provide an exhaust tuning effect to exhaust gasses passing through said muffler, said exhaust flow path comprising: first (Figure 2, #11) and second (10) passages, each of said first (11) and second (10) passages being curved through an angle of at least 180°; and at least one expansion volume (5).

With respect to Claims 2 and 16, Hoche teaches wherein an exhaust flow path is curved through an angle of at least 270° (Figure 2).

With respect to Claims 4, 13 and 19, Hoche teaches wherein said first and second passages each have a substantially constant cross-sectional area (Figure 2).

With respect to Claims 5, 11 and 17, Hoche teaches a first expansion volume (Figure 2, #3 – Examiner is referring to the volume area surrounding the inlet denoted by #3) in fluid communication with an inlet (3) said first passage (10) in fluid communication with said first expansion volume (32, 33), a second expansion volume (32, 33) in fluid communication with said first passage (10), and said second passage (11) in fluid communication with said second expansion volume (32,33) and with said outlet (4).

With respect to Claims 8, 14 and 22, Hoche teaches at least one resonance chamber (Figure 2, #6).

2. Claims 1, 6, 9, 10, 15, 17, 20 and 23-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Martinez (4,165,798).

With respect to Claims 1, 9, 15 and 17, Martinez teaches a muffler for an internal combustion engine comprising: a housing (Figure 2) having an inlet (11) and an outlet (10), an exhaust flow path defined within said housing, said exhaust flow path dimensioned to provide an exhaust tuning effect to exhaust gasses passing through said muffler, said exhaust flow path comprising: first (N) and second (C) passages, each of said first (N) and second (C) passages being curved through an angle of at least 180°; and first (G) and second (E) expansion volumes.

With respect to Claims 6, 10 and 20, Martinez teaches a first layer (Figure 2, #1) in which a substantial portion of said second passage (C) is disposed, said first layer (1)

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disposed proximate said inlet (11); and a second layer (3) in which a substantial portion of said first passage (N) is disposed, said second layer (3) connected to said first layer (1) and disposed distally from said inlet (11).

With respect to Claim 23, Martinez teaches a first shell (Figure 2, #1) including an exhaust inlet (11) and containing a first portion of an exhaust passage (C), said first portion of said exhaust passage (C) curved through an angle of at least 180°; a second shell (3) including an exhaust outlet (9) and containing a second portion of said exhaust passage (N), said second portion of said exhaust passage (N) curved through an angle of at least 180°; and a partition element (2) disposed between said first (1) and second (3) shells, said partition element (2) substantially separating said first (C) and second (N) portions of said exhaust passages.

With respect to Claims 24 and 25, Martinez teaches wherein said first (Figure 2, #C) and second (N) portions of said exhaust passage each have a substantially constant cross-sectional area, and an expansion volume (G) disposed between them.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 7, 12 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoche (DE 102 39 132.7), in view of Mukai (5,726,397). Hoche is relied upon for the reasons and disclosures set forth above. Hoche fails to disclose a tailpipe in fluid communication with said second passage and with said outlet. Nevertheless, Mukai discloses a tailpipe (Figure 5, #11) in fluid communication with a second passage (Figure 2, #10h) and with an outlet.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of Hoche with the apparatus of Mukai in order to attenuate multiple frequency bands.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pertinent arts of record relating to tuned mufflers for small internal combustion engines are disclosed in the PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy Luks whose telephone number is (571) 272-2707. The examiner can normally be reached on Monday-Thursday 8:30-6:00, and alternating Fridays 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on (571) 272-2800 x33. The fax phone

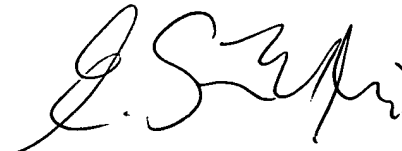
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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jeremy Luks  
Patent Examiner

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A handwritten signature in black ink, appearing to read 'E. San Martin', with a stylized flourish at the end.

Edgardo San Martin  
Primary Examiner